

REMARKS

Reconsideration of the application is requested in view of the above amendments and the following remarks. Claims 2, 6, 7, 9 and 10 have been amended. Claim 2 has been amended to correct a typographical error. Claims 6 and 7 have been amended to properly depend from claim 10. New claim 11 has been added. Amendments to claims 9 and 10 and the limitations of new claim 11 are supported by the original claims, Figure 1, and the description at pages 4-5 of the present application. No new matter has been added.

Claims 2-10 were rejected under 35 U.S.C. § 102(b) as being anticipated by JP 02-151,358 (JP '358). Applicants respectfully traverse this rejection.

JP '358 discloses a selector valve plug 10 with separate portions 10a and 10b at opposing ends of the plug and a middle section 10c having a reduced diameter. When in a right-oriented position, portion 10b shuts off a gate 7 from a cylinder 3 while at the same time the center portion 10c provides an opening between gate 7 and evacuating passage 9. When in a left-orientated position, portion 10b shuts off communication between gate 7 and evacuating passage 9 and allows molten metal stored in cylinder 3 to pass into gate 7 to fill cavity 1. Thus, valve plug 10 is configured to provide both an evacuating function (evacuating cavity 1 and gate 7 prior to filling) as well as a filling function (facilitating flow of molten metal between cylinder 3 and cavity 1 and gate 7) depending on the linear position of the valve plug 10.

JP '358 fails to disclose "an isolation valve positioned at a first side of the mold cavity" and "a chamber valve . . . positioned at a second side of the mold cavity," as required by claim 9, or "evacuating the mold cavity and injection channel through the isolation valve with the vacuum device at the first side of the mold cavity; . . . and filling the mold cavity with molten melt from the casting chamber through the chamber valve at the second side of the mold cavity after the evacuating step," as required by claim 10. The valve plug portions 10a, 10b disclosed by JP '358 are integrated as a single member that functions at only one side of the mold cavity. Therefore, JP '358 fails to disclose every limitation of claims 9 and 10 and the claims that depend from them.

New claim 11 requires "an isolation valve configured to function independent of the casting chamber" and "a chamber valve movable within the casting chamber to control an opening between the casting chamber and the injection channel, the chamber valve being operable independent of the isolation valve." JP '358 and the other art of record fail to disclose or suggest an isolation valve that functions independent of the casting chamber or a chamber valve that is operable independent of the isolation valve. Consideration and allowance of new claim 11 is respectfully requested.


The configurations of claims 10 and 11 provide at least the advantage of being able to evacuate the mold cavity over a longer period of time prior to and during filling of the mold cavity with the moldable material because of the separate and isolated nature of the isolation and chamber valves (See pages 2-3 of the present specification). Further, the configuration of claims 10 and 11 provide for a die casting device that has fewer parts and less required mechanical movement as compared to known die casting devices that integrate the isolation and chamber valves.

In view of the above, Applicants request reconsideration of the application in the form of a Notice of Allowance. If a telephone conference would be helpful in resolving any issues related to this matter, please contact Applicants' attorney below at 612.371.5265.

Respectfully submitted,

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